

(No Model.)

F. F. UNKRICH.
SASH FASTENER.

No. 525,930.

Patented Sept. 11, 1894.

Fig 1

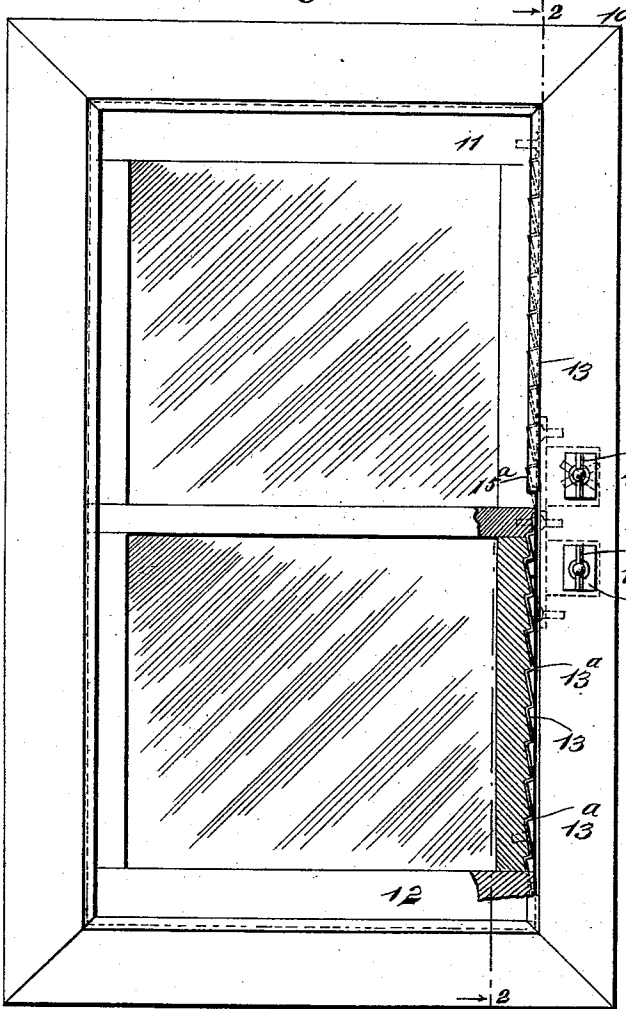
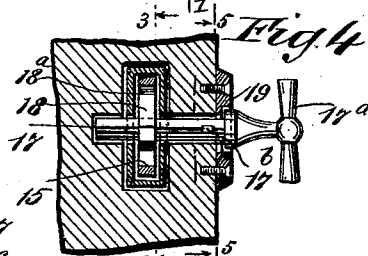
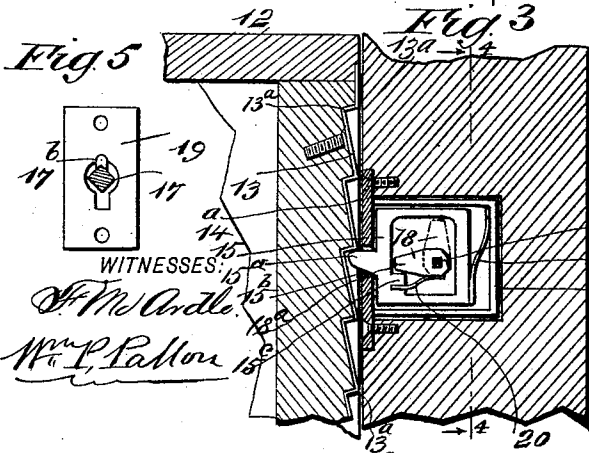
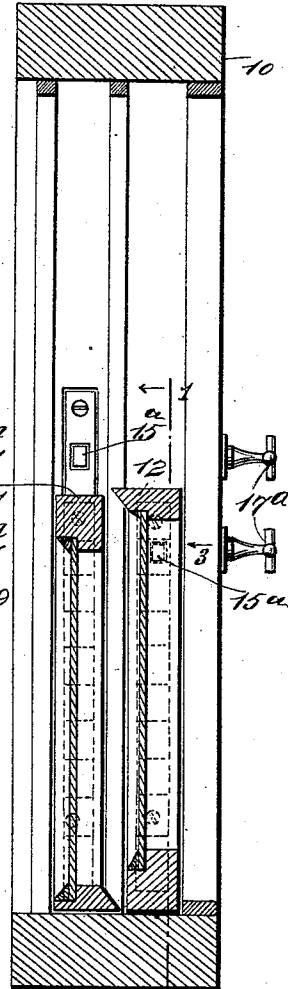


Fig 2



WITNESSES:
Wm. A. Ordle
Wm. I. Patton

3^d INVENTOR
F. F. Unkrich
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

FERDINAND F. UNKRICH, OF GALION, OHIO.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 525,930, dated September 11, 1894.

Application filed May 21, 1894. Serial No. 511,925. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND F. UNKRICH, of Galion, in the county of Crawford and State of Ohio, have invented a new and useful Improvement in Sounding Sash-Locks, of which the following is a full, clear, and exact description.

My invention relates to an improvement in sash locks, and has for its object to produce a novel, simple device of the character indicated, which will be adapted to retain a window sash at any desired point of sliding adjustment, and afford means to securely lock the adjusted sash, either entirely open, partly open or completely closed.

A further object is to provide a sash lock so constructed in its working parts, that it will be adapted to sound an alarm if tampered with to open the window by moving the sash.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views shown.

Figure 1 is a partly sectional inside view of a window having the improvement applied to its upper and lower sashes. Fig. 2 is a transverse sectional view of the window on the line 2—2 in Fig. 1, showing the relative position of parts of the improvement as applied to the upper and lower sashes, the upper sash being in lowered adjustment. Fig. 3 is an enlarged sectional inside view in part of a window frame and the lower sash, taken opposite the arrow 3 in Fig. 2, and on the line 3—3 in Fig. 4. Fig. 4 is a transverse sectional view of part of the window casement and essential parts of the improvement, on the line 4—4 in Fig. 3; and Fig. 5 is a detached, partly sectional view of an escutcheon plate and a rotatable spindle that are parts of the improvement, the view being taken on the line 5—5 in Fig. 4.

The improvement in duplicate form is adapted for service on the upper and lower sashes of a window, and as the operation of the sash lock for each sash is the same, the one applied to the lower sash has been illustrated in detail and will be specifically described as sufficient to show the invention.

10 is the casement of a window whereon the improvement in duplicate is applied to support and lock the vertically movable upper sash 11 and lower sash 12.

Preferably for convenience in operation, the sash locking devices are located on the right side of the window, and as clearly represented in Figs. 1 and 3, there is a metallic rack 13, having teeth in ratchet form, embedded in the side edge of the sash. The teeth on the rack 13 slope inwardly and upwardly from below so as to produce offsets at regular intervals, which offsets 13^a are adapted to receive the impinge of a peculiarly shaped locking bolt 15, that is part of the improvement.

The sash lock proper, comprises a case 14, of rectangular form proportioned in dimensions to be received and secured in a mortise 10^a, that is produced in the jamb of the casement at a point in the right stile of the same, near the upper or meeting rail of the lower sash 12, when the latter is closed, the case having a face plate 14^a formed on it to afford means for securing said case in the mortise, by screws inserted in the plate and jamb as shown in Fig. 3. One side of the case is made removable to permit the insertion of working parts of the device. The locking bolt 15, before mentioned is loosely fitted in the case 14, and consists essentially of a rectangular frame, that is arranged to slide a limited distance, it having a nose piece 15^a projected from its edge through a slot 15^b, in the face plate, of the case 14. The nose 15^a is of such a length as will allow it to have an interlocking engagement between any pair of teeth on the rack 13, when the sash is in place, the free end of said nose being slightly rounded to allow it to freely slide over the ratchet teeth 13^a, when the sash 12, is elevated. The yoke framed locking bolt 15, is pressed from the rear, so as to cause its nose piece to normally project through the face plate 14^a, by the curved plate spring 16, that has one end attached to the bolt frame on its rear vertical wall, and the other end loosely engaged with the rear wall of the case 14.

Means for manipulating the locking bolt 15 from the inside of the casement 10, comprises a spindle 17, the body of which is preferably made square in cross section, said spindle be-

ing located in a suitable horizontal perforation produced in the casement stile as indicated in Fig. 4, and crossing the mortise wherein the case 14 is located. A cross handle 17^a, or if preferred, a knob is formed on or secured to the outer end of the spindle 17 for its convenient manipulation. An escutcheon plate 19 is provided to form a finish on the casement and sustain the spindle 17, the latter having a collar formed on it near its handle, which collar is loosely seated in a counter-bored perforation in the plate, through which the body of the spindle is passed when the parts of the device are assembled, and a notch is cut in the perforation in the escutcheon plate to permit of the passage of a knob 17^b through the notch, said knob being designed to prevent the removal of the spindle whereon it is formed. The case 14, is transversely perforated at a point opposite the perforation in the plate 19, through both of its walls, so that the spindle 17, may be loosely inserted and retained free to rotate in said perforations.

On the spindle body a locking block 18, is fitted, this block being shaped as shown in Figs. 3 and 4, consisting of a metal body having a square transverse perforation formed in it near one end, to permit it to be mounted on the spindle and occupy a portion of the space afforded in the rectangular frame of the locking bolt 15, the block being of such a length as will allow its free end 18^a to have contact with the inner edge of the front vertical bar on the frame of the locking bolt 15, when the spindle 17, is rotatably moved to effect such an engagement of parts, which, when produced, will securely lock the bolt 15 in forward adjustment.

As shown in Fig. 3 there is a projection 15^c, formed on the inner edge of the front vertical bar of the locking bolt frame, which projection is at the lower front corner of said frame and serves to prevent the locking block 18, from being rotated forwardly and downwardly farther than a horizontal position, which will insure the locking engagement of said block with the frame of the bolt 15, as before explained.

The end of the block 18, that is nearest to the rear bar of the bolt frame 15, is made parallel with the locking end 18^a of said block, so that a plate spring 20, which is fastened by one end to the projection 15^c of the bolt 15, and has its free end in contact with the edge of the locking block, will be adapted to retain the block 18 in an upright position as shown by dotted lines in Fig. 3, when the spindle 17, is rocked to remove said block from its horizontal or locked position. This spring by its pressure on the side edge of the

locking block below the spindle 17, also serves to prevent the spindle from rattling and retain the block 18, in a locked condition when so adjusted.

To raise the lower sash, if the spindle 17 and locking block 18 are adjusted as represented by dotted lines in Fig. 3, the locking bolt 15 will be rapidly vibrated by the joint action of the rack teeth that successively impinge the nose piece 15^a and of the spring 16, which presses the bolt forward.

As the case 10 affords a resonant chamber, the traverse of the rack 13 over the nose piece 15^a will cause a loud clattering noise, which will be sufficient to attract the attention of the occupants of the house and warn them that the window is being moved, which, if done by a burglar, will prevent the intrusion of the thief. This is one of the features of advantage afforded by the peculiar construction of the device.

When it is desired to secure the window sash at any point of elevated adjustment, it is only necessary to throw the block 18 into the position indicated by full lines in Fig. 3, which will project its free end opposite and in contact with the locking bolt 15, which adjustment will prevent the retraction of the latter and lock the sash closed, or raised at any point desired.

As before mentioned, the upper sash 11 is furnished with the improvement, that is a duplicate of that for the lower sash, and in a like manner with that on the lower sash affords convenient and reliable means to lock the upper sash completely elevated or depressed, as far as may be required for ventilation or other purposes.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

The combination with a casement, a sash, and a ratchet toothed rack on a side edge of the sash, of a case embedded in the casement, a bolt comprising a frame and a nose piece thereon which has its free end rounded and projects said end through the case engaging the teeth of the rack, a spring forwardly pressing the bolt frame, a transverse spindle in the casement and case, a block on the spindle that rocks with it toward the nose on the bolt frame locking it from recession, and a spring on the bolt frame pressing the block either on its side or end, and thus respectively holding it in locked, or unlocked adjustment, substantially as described.

FERDINAND F. UNKRICH.

Witnesses:

W. R. COLLEY,
FRANK FLICKINGER.